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DOI: https://doi.org/10.1037/dev0000502

Feeling Loved and Integrated or Lonely and Rejected in Everyday Life: The Role of Age and Social Motivation

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Author Note

This study was supported by Grant 2012/12 (Project "Changes in Adaptivity of Social Approach and Avoidance Behavior across Adulthood") from the Suzanne and Hans Biäsch Foundation for the Promotion of Applied Psychology (PI: Jana Nikitin), and by Grant 100019_159399 (Project "Why is social avoidance motivation detrimental to young but not older adults?") from the Swiss National Science Foundation (PI: Jana Nikitin). Correspondence concerning this article may be addressed to the first or second author: jana.nikitin@unibas.ch or freund@psychologie.uzh.ch. We are grateful to Julia Stoll with her help with data collection and the Life-Management Lab for fruitful discussions of the work.

Abstract

Social approach and social avoidance goals (i.e., approach of positive and avoidance of negative outcomes in social situations) are important predictors of the feeling of being socially integrated or isolated. However, little is known about the development of these goals across adulthood. In a large diary study with $N = 744$ young (18–39 years), middle-aged (40–59 years), and older adults (60-83 years), we tested the hypothesis that the adaptiveness of social goals changes across adulthood: Social approach goals were hypothesized to be adaptive during young adulthood when adult social relationships are to be established. In contrast, social avoidance goals were hypothesized to become more adaptive with age as people are increasingly motivated to avoid interpersonal tension. Our findings support these hypotheses: Social approach goals were positively and social avoidance goals negatively associated with younger but not with middle-aged and older adults' daily social well-being. These results were robust across different situations (positive, negative) and different types of relationships (close, peripheral). The study highlights the changing role of social approach and avoidance goals for daily social well-being across adulthood.

Keywords: social approach and avoidance goals, social integration, isolation, adult-age differences

Feeling Loved and Integrated or Lonely and Rejected in Everyday Life: The Role of Age and Social Motivation

Establishing and maintaining satisfying social relationships is essential for psychological and physical health across the life span (Umberson, Crosnoe, & Reczek, 2010). As Baumeister and Leary (1995) argued, social integration can be regarded a basic psychological need throughout the entire life span and, accordingly, the devastating consequences of isolation are observable in any life phase (Berkman, Glass, Brissette, & Seeman, 2000). Not surprisingly then, the strength of social motivation—the motivation to establish and maintain social relationships—seems to be fairly stable across adulthood (Valero, Nikitin, & Freund, 2015).

There are two fundamental orientations of social motivation that contribute to social integration and isolation: social *approach* motivation (i.e., approaching positive social outcomes such as love, acceptance, and belonging) and social *avoidance* motivation (i.e., avoiding negative social outcomes such as conflict, rejection, and isolation;Gable & Berkman, 2008; Mehrabian & Ksionzky, 1974). Previous research has demonstrated that social approach motivation is associated with positive interpersonal feelings (e.g., feeling loved and integrated), whereas social avoidance motivation is associated with negative interpersonal feelings (feeling lonely and rejected; for a summary of this research, see Nikitin & Schoch, 2014). This research has mainly been conducted with young adults. Thus, it is currently an open question whether social approach and avoidance motivation influence social well-being beyond young adulthood. The present study addresses this question. We conceptualize social approach and social avoidance motivation as the striving for positive and the avoidance of negative social outcomes in social relationships (i.e., social approach

and avoidance goals; Elliot, Gable, & Mapes, 2006). In line with the conceptualization of goals as flexible adaptations to changing life circumstances (McAdams & Olson, 2010), we expect that the effects of social approach and social avoidance goals change as circumstances change with age. We test this prediction on young, middle-aged, and older adults' social well-being (i.e., feelings of integration and isolation) in daily social situations. In addition, we explore two possible age-relevant moderators of the association between goals and social well-being: the closeness of the relationship and the valence of the social situation.

Social Approach and Social Avoidance Goals Across Adulthood

Goals are defined as cognitive representations of end states that a person wants to attain or avoid (e.g., Emmons, 1996). In the social domain, social approach goals focus on positive social possibilities and monitor the presence or absence of positively valenced outcomes, whereas social avoidance goals focus on negative social possibilities and monitor the presence or absence of negatively valenced outcomes (e.g., Elliot et al., 2006).

Goals have been called "personality-in-context" (Little, 1989), which expresses the notion that goals are based on dispositional traits, but also reflect the current circumstances (e.g., when moving to a new town, many people will try to make new connections, irrespective of their traits; McCabe & Fleeson, 2012). In the present research, we assume that these circumstances change with age and so change the adaptiveness of social approach and avoidance goals. This hypothesis is based on McAdams and Olson's (2010) proposal that goals are ways to master social and psychological tasks at particular times in peoples' lives. As McAdams and Olson put it, "people do more than merely act in more-or-less consistent ways across situations and over time" (p. 524). Instead, people actively shape their own development in

interaction with the environment by setting and pursuing goals (see also Freund & Riediger, 2006). Setting and pursuing goals is a process of optimizing the fit between a person and the environment when faced with internal or external changes. In the following, we discuss what age-related social changes young and older adults face.

Adaptivity of social approach goals across adulthood. Socio-emotional selectivity theory (SST; Carstensen, Isaacowitz, & Charles, 1999) maintains that young adults perceive their lifetime as seemingly endless and full of opportunities. This, according to the SST, motivates them to prioritize goals that prepare them for a long future (e.g., collecting new information). One way to prepare for the future is to approach diverse, new social relationships that may offer valuable opportunities for the future. Young adulthood is characterized by forming new relationships after moving away from home, finding a romantic partner, and building social networks at the workplace (Arnett, 2000; Eccles, Templeton, Barber, & Stone, 2003; Nikitin & Freund, 2008; Nurmi, 1992). As social approach goals create opportunities for new social contacts (Gable, 2006), social approach goals might be beneficial in young adulthood. Given that the value of maintaining social relationships outweighs the interest in getting to know new people in older adulthood (e.g., Antonucci, Fiori, Birditt, & Jackey, 2010; Fung, Carstensen, & Lang, 2001), the potentially adaptive function of social approach goals should decrease across adulthood. In line with this hypothesis, Nikitin and colleagues (Nikitin, Schoch, & Freund, 2014) demonstrated that young but not older adults report more social approach than social avoidance goals and that social approach goals are also more important for young adults' well-being in an interpersonal situation.

Adaptivity of social avoidance goals across adulthood. According to the SST, the decreasing future time horizon is assumed to result in an emphasis on

emotion regulation in old age (i.e., the desire to maintain a high level of well-being). In fact, older adults report goals of social harmony more often than do younger adults (Birditt & Fingerman, 2003) and they engage more often and more successfully than younger adults in behaviors that prevent (the escalation of) tense situations (Birditt & Fingerman, 2005; Birditt, Fingerman, & Almeida, 2005; Blanchard-Fields, 2007; Levenson, Carstensen, & Gottman, 1994). Such behaviors include walking away from a situation, not arguing, waiting for the problem to pass, or infusing negative comments with positive ones. Older adults recommend avoidance-related strategies to others, suggesting that they regard them as beneficial (Charles & Carstensen, 2007). At the same time, older adults report lower levels of well-being than younger adults when they cannot avoid a negative social encounter (Birditt et al., 2005; Charles, Piazza, Luong, & Almeida, 2009; Nikitin et al., 2014) and when negative events persist (Charles & Carstensen, 2008). Thus, it seems to be more essential for the maintenance of emotional balance and well-being of older compared to younger adults to avoid negative social events (Charles & Carstensen, 2010; Charles et al., 2009). Based on these findings, we expect that the adaptiveness of social avoidance goals increases with age. In other words, we expect that the negative correlates of social avoidance goals that have been repeatedly found in young adults decrease as people age.

The Present Study

In order to test these hypotheses, the present study investigates social approach and social avoidance goals as correlates of social well-being in daily social situations on seven consecutive days. Participants are young (18–39 years), middle-aged (40–59 years), and older adults (> 60 years). The study has four goals.

First, the study aims to provide better insight into the age-related correlates of

social approach and social avoidance goals. To our knowledge, so far only one study has focused on this question (Nikitin et al., 2014). In that study, social approach and avoidance goals were manipulated and tested with respect to their effect on the experience of a social interaction in the lab. The present study broadens the focus to people's daily lives and includes middle-aged adults in the sample.

Second, the study focuses on positive and negative aspects of daily social well-being (feelings of social connection such as feeling loved and integrated, and feelings of social disconnection such as feeling lonely and rejected). Previous research demonstrated that feelings of social connection and disconnection have differential predictors (Butler et al., 2003; Hsu et al., 2013; Lun, Kesebir, & Oishi, 2008; Morelli, Torre, & Eisenberger, 2014; Oishi, Schiller, & Gross, 2013; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Generally speaking, positive social feelings arise from positive social experiences, whereas negative social feelings arise from negative social experiences. As positive social experiences are at the focus of social approach goals and negative social experiences are at the focus of social avoidance goals (for summaries of the research, see Gable & Berkman, 2008; Mehrabian, 1994; Nikitin & Schoch, 2014), we expect to find that social approach goals correlate with positive social well-being (i.e., feelings of being loved and integrated), whereas social avoidance goals correlate with negative social well-being (i.e., feelings of being lonely and rejected). This hypothesis is also in line with the notion that social approach goals, on the one hand, and social avoidance goals, on the other, are two largely independent motivational systems that operate simultaneously and influence motivational outcomes through different processes (e.g., Gable, 2006).

Third, the present study explores two possible age-relevant moderators of the expected age-differential correlates of social approach and social avoidance goals on

daily social well-being: the closeness of the relationship and the valence of the situation. There is some evidence that close social relationships are more important for older adults than peripheral or new social relationships. For example, whereas the peripheral social network (such as relationships with colleagues, acquaintances, or neighbors) shrinks with age, the close social network (such as relationships with close friends and family) remains stable until old age (Antonucci et al., 2010; Lang & Carstensen, 1994). Typically, older adults are more strongly motivated to socialize with close than with peripheral social partners, which is less the case in young adulthood (Fredrickson & Carstensen, 1990; Fung, Carstensen, & Lutz, 1999). Therefore, we investigate whether relationship closeness moderates the age-differential associations between social approach and social avoidance goals and daily social well-being. In addition, we explore whether the expected age-differential correlates of social approach and social avoidance goals in the most positive and the most negative social situations of a given day differ. Whereas the most positive situation of the day may indicate that people met their social goals, the most negative situation may indicate the opposite (Nikitin et al., 2014). Thus, particularly in the most negative situation the potential adaptiveness of social approach goals for young adults and the potential adaptiveness of avoidance goals for older adults might be diminished (as these goals were not met). This might attenuate the moderating effect of age regarding the relationship between social approach and social avoidance goals and social well-being.

Fourth, we explore mean-level differences in social approach and avoidance goals across the three age groups. In general, goal orientation shifts from the approach of gains to the avoidance of losses (Ebner, Freund, & Baltes, 2006), so older adults should also tend to set and pursue social approach goals less than and social

avoidance goals more than younger adults. First support for this hypothesis came from self-reports on social approach and avoidance goals in young and older adults (Nikitin et al., 2014). We also explore whether younger and older adults differ in their social approach and social avoidance goals in different social situations (positive, negative) and different types of relationships (very close, close, less close, new).

To rule out the possibility that the hypothesized age-related adaptiveness of social approach and avoidance goals for daily social well-being are confounded by other variables, we include several variables that potentially influence daily social well-being. We include the most common predictors of subjective well-being such as mental and physical health (Steptoe, Deaton, & Stone, 2015), habitual subjective well-being and general satisfaction with life (Eid & Diener, 2004), and some prominent demographic variables such as the participants' gender (Robinson, 2014) and partnership status (Diener & Seligman, 2002). We also include habitual growth and deficit-reduction orientations of the need to belong as control variables (Lavigne, Vallerand, & Crevier-Braud, 2011). *Growth orientation of the need to belong* refers to the motivation to connect with others because of a genuine interest in them and is associated with extraversion, attachment security, and high levels of well-being (Lavigne et al., 2011). *Deficit-reduction orientation of the need to belong* refers to the motivation to connect with others to fill a social void and is associated with a constant craving for social acceptance, neuroticism, social anxiety, insecure attachment, and low levels of well-being (Lavigne et al., 2011). Both orientations are assumed to be stable dispositions and may, therefore, influence social well-being across adulthood. Finally, we control for the day of the week as weekdays are associated with lower levels of well-being than weekend days (Stone, Schneider, & Harter, 2012).

Method

Sample

A total of $N = 880$ participants were recruited using a German online recruitment service[1] and were compensated for filling out the questionnaire with €3 (approximately $3.18) and for each completed diary with €1 (approximately $1.06). The convenience sample consisted of $n = 285$ young (18–39 years), $n = 293$ middle-aged (40–59 years), and $n = 302$ older adults (60–83 years). Of those, $N = 813$ participants completed at least one diary[2]. Sixty-eight participants were excluded from the study because they did not answer at least one of two control questions correctly ("For technical purposes, please click on the '5'"). The control questions, designed to catch participants who simply click through the responses in order to receive compensation without actually reading the items, were placed randomly in two different locations in the questionnaire. In addition, one participant in the middle-aged group was excluded because he reported an age outside of the specified age range.

Thus, the following analyses are based on a sample of $N = 744$ participants ($n = 239$ young, $n = 253$ middle-aged, and $n = 252$ older adults) who completed a total of 4,202 diaries (young adults = 1,284, middle-aged adults = 1,416, older adults = 1,502), with an average of $M = 5.65$ ($SD = 1.79$) diaries per person. Although the number of completed diaries differed between the age groups (young adults: $M = 5.37$, $SD = 1.91$, middle-aged adults: $M = 5.60$, $SD = 1.82$, older adults: $M = 5.96$, $SD = 1.60$), $F(2,741) = 6.84$, $p = .001$, there were no substantial correlations between number of completed variables and the (aggregated) diary variables, all rs $\leq |.07|$, all ps $\geq .05$.

Table 1 reports sociodemographic information about the sample. As can be seen in Table 1, the age groups differed with respect to almost all sociodemographic

characteristics considered. These differences are not unexpected for a typical sample from Germany (e.g., see www.destasis.de for more information about age-related sociodemographic characteristics in the German population). In order to test if the sociodemographic differences accounted for the hypothesized age differences in the diary variables, we included them as control variables in all main analyses (see bellow).

Procedure

First, the participants completed an online questionnaire assessing socio-demographic characteristics and control variables. Approximately one week later, the participants were asked to complete an online diary on seven consecutive days (beginning on Monday). In the diary, they reported their social well-being during the past 24 hours. We chose this procedure because we wanted to keep the time slot constant while at the same time not restricting the time when participants filled out the diaries (which gave participants the possibility to easily include the diaries in their individual daily routines and, at the same time, minimized systematic biases such as caused by tiredness if we—for example—forced participants to fill out the diaries always in the evening). In addition, participants were asked to think about the most positive and the most negative social interaction they had experienced in the past 24 hours. A social interaction was defined as any encounter with one or more other individual(s) in which the individuals interacted with each other. The mere presence of another person was not included in this definition (see also Nikitin, Burgermeister, & Freund, 2012). The participants reported with whom they had interacted and how close the closest person in the interaction was to them. In addition, the participants reported their social approach and social avoidance goals for the reported social situations.

Measures

The descriptive statistics for all variables are reported in Tables 1 (sociodemographic and control variables) and 2 (aggregated daily level). Correlations between the variables are reported in Table 3.

Social approach and social avoidance goals. The participants were asked to think about the most positive and the most negative interpersonal situation during the past 24 hours. For both situations, participants reported how strongly they pursued positive social outcomes (*social approach goals*: "Did you want to achieve something positive in the situation?") and how strongly they wanted to avoid negative social outcomes (*social avoidance goals*: "Did you want to avoid something negative in the situation?"). The participants marked their responses on a 7-point scale (0 = *not at all*, 6 = *very much*). This operationalization of social approach and social avoidance goals was developed by the authors so that (a) it reflected the definition of social approach and avoidance goals as closely as possible (e.g., Gable & Berkman, 2008), (b) it was as broad as possible in order to capture different individual approach and avoidance goals, and (c) it was as economic as possible in order to keep the diary short. The re-test reliability of approach goals across the seven days was $\alpha = .79$ in the most positive daily situations and $\alpha = .79$ in the most negative situations. The re-test reliability of avoidance goals across the seven days was $\alpha = .82$ in the most positive situations and $\alpha = .76$ in the most negative situations. Social approach and social avoidance goals were positively correlated ($r = .68$, $p < .001$, at the aggregated level across the seven days).

Relationship closeness. In addition, the participants were asked to report how close the person they had interacted with in the situation was to them (1 = very close, 2 = close, 3 = less close, 4 = new contact; the authors' own development leaned on the

convoy model; Kahn & Antonucci, 1980). The distribution of social interactions across different types of relationship closeness, positive and negative social situations, and age groups is reported in Table 4.

Daily social well-being. Before reporting the two social situations, the participants reported (Idler & Benyamini, 1997)their social well-being during the particular day ("How often did you feel .... in the past 24 hours?"). Two adjectives assessed positive social well-being ("loved" and "integrated"), and two adjectives assessed negative social well-being ("lonely" and "rejected"; authors' own development; internal consistencies and descriptives are presented in Table 2). The participants marked their responses on a 7-point scale ranging from 0 (*never*) to 6 (*all the time*). The re-test reliability of positive social well-being across the seven days was $\alpha = .95$; the re-test reliability of negative social well-being was $\alpha = .94$. At the aggregated level across the seven days, positive and negative social well-being were negatively correlated ($r = -.63$, $p < .001$).

Control variables. The control variables were day of the week (1 = week days, 2 = weekend days), participants' gender (1 = male, 2 = female), participants' partnership status (1 = single, widowed, divorced vs. 2 = married or in stable partnership), habitual mental health and physical health (assessed by one item each: "Generally, how would you evaluate your mental [physical] health?", 0 = *very bad*, 6 = *excellent*; see Idler & Benyamini, 1997, for the validity of one-item assessements of subjective health), habitual subjective well-being in the past few weeks (assessed by the Multidimensional Mood questionnaire with the subscales valence [four items, e.g., "satisfied", internal consistency = .86], positive activation [four items, e.g., "alert"; internal consistency = .85], and negative activation [four items, e.g., "uneasy" reversed, = .82]; Steyer, Schwenkmezger, Notz, & Eid, 1997; 0 = *never*, 6 = *all the*

time; see the supplemental materials, p. S12 for the full set of items), and general satisfaction with life ("Altogether, how satisfied are you with your life?", 0 = *not at all,* 6 = *very*; Haisken-DeNew & Frick, 2005). In addition, we controlled for social growth orientation and deficit-reduction orientation using the belongingness orientations scale (Lavigne et al., 2011). The participants were asked to report why social relationships are important to them by rating their level of endorsement of 10 statements (0 = *totally disagree*, 6 = *totally agree*). Five statements assessed growth orientations (e.g., "My interpersonal relationships are important to me because I find it exciting to discuss with people on numerous topics.", internal consistency $\alpha = .87$), five statements assessed deficit-reduction orientation (e.g., "My interpersonal relationships are important to me because I don't want to be alone.", internal consistency $\alpha = .81$; see the the supplemental materials, p. S12, for the full set of items).

As is typical for samples in cross-sectional studies (Daig, Herschbach, Lehmann, Knoll, & Decker, 2009; Diener, Suh, Lucas, & Smith, 1999; Isaacowitz, Charles, & Carstensen, 2000; Mroczek & Kolarz, 1998; Piazza & Charles, 2006), older adults reported higher levels of satisfaction with life, of habitual well-being, and of mental health, but lower levels of physical health as compared to the younger age groups (see Table 1).

Data Analysis Plan

To test our hypotheses, we used multilevel modelling, which is recommended when data are nested within different levels as in our study (Level 1 = situations, Level 2 = days, and Level 3 = persons; e.g., Tabachnick & Fidell, 2001). We ran the random intercept model, which accounts for the fact that data vary between participants (as the random intercept and slope model did not change the results, we

decided—for the sake of parsimony—to use only the random intercept model). The control variables were added at Level 2 (day of the week) and Level 3 (life satisfaction, habitual well-being, self-reported physical and mental health, growth orientation and deficit-reduction orientation, gender, and partnership status). Detailed analyses of all control variables as predictors of daily social well-being are reported in the supplemental materials (Table S2). We used the maximum likelihood method of estimating the parameters, with which we could compare the models (e.g., as recommended in Raudenbush & Bryk, 2002). Age was introduced as a categorical variable with 1 = young adults, 2 = middle-aged adults, and 3 = older adults.[3] Table 5 presents a summary of the analyses (analyses without control variables revealed the same result patterns and are reported in the supplemental materials, Table S1). We analyzed the data with the linear mixed-models procedure using SPSS Statistics Version 23. Significant interactions were probed by using a subgroup-analysis approach, in which the data are split into groups (e.g., young, middle-aged, and older adults) and the analyses are repeated on these subgroups (see Newsom, Prigerson, Schulz, & Reynolds, 2003).

Results

Preliminary Analyses

First, we explored the distribution of social interactions across cells defined by age groups, relationship closeness, and situational valence (see Table 4). Compared to young adults, middle-aged and older adults reported more social interactions with very close and less close persons. In contrast, young adults reported more social interactions with close persons. The age groups did not differ in the frequency of contacts with new social partners. The age-group differences in interactions with very close and close social partners were mirrored in the most positive and the most

negative social interactions (in the most negative interactions with close persons, the age differences only approached the .05-level, see Table 4). In general, participants reported more social interactions with very close social partners (37.1% of all interactions), followed by interactions with less close partners (27.1%), close partners (18.7%), and new contacts (17.1%), $\chi^2(3) = 845.41$, $p < .001$ (all contrasts were also statistically significant: all $\chi^2(1) \geq 6.05$, all ps $\leq .01$).

Second, we explored correlations between social approach and avoidance goals at the aggregated level (Table 3). In contrast to previous findings, social approach and avoidance goals were positively correlated ($r = .68$, $p < .001$). This indicates that, at the situational level, social approach and social avoidance goals are not independent.

Predictors of Daily Social Well-Being

In order to compare the effect of (1) goals and (2) their interaction with age, we ran two multilevel linear models for positive well-being as the criterion variable and two multilevel linear models for negative well-being as the criterion variable. We started with the simplest model (Model 1) with social approach and social avoidance goals as predictors of daily social positive (or negative) well-being. In Model 2, we added age and its interaction with social approach and social avoidance goals. Finally, Model 3 also included the three-way interaction between age, goals, and relationship closeness (Model 3a) and situational valence (Model 3b) as predictors. All models were run with the covariates.

Social approach and social avoidance goals. The hypothesis that social approach goals predict positive social well-being and social avoidance goals predict negative social well-being was partially supported (see Table 5, Model 1). As expected, social approach goals predicted positive social well-being, whereas social

avoidance goals predicted negative social well-being. However, positive social well-being was also (negatively) predicted by social avoidance goals. In other words, participants who reported stronger social approach goals and weaker social avoidance goals in the interpersonal situations felt more loved and integrated at the end of the day. Those who reported weaker social avoidance goals also felt less lonely and less rejected. Importantly, these associations held, even when the control variables (day of the week, participant's gender, partnership status, mental and physical health, habitual well-being, life satisfaction, and growth and deficit-reduction orientation of the need to belong) were controlled for.

Age × Goals. To test whether the associations between goals and well-being were moderated by age, we included age and the two-way interaction terms of goals and age in Model 2 (see Table 5, Model 2). Social approach goals interacted with age in the prediction of positive social well-being and both social approach and social avoidance goals interacted with age in the prediction of negative social well-being. To better understand these interactions, we re-ran the analyses separately for the three age groups. The results were consistent with the hypotheses: The relationship between social approach goals and positive social well-being was significant in the group of young adults ($b = 0.04$, $p < .001$, 95% CI [0.02, 0.06]), but not in the group of middle-aged or older adults ($ps \geq .15$). Similarly, the relationships between social approach and social avoidance goals and negative social well-being were significant only for young adults (social approach goals: $b = -0.03$, $p = .001$, 95% CI [-0.05, -0.01]; social avoidance goals: $b = 0.04$, $p < .001$, CI 95% [0.02, 0.06]), but not for middle-aged or older adults (all $ps \geq .12$). Age itself did not additionally predict positive daily social well-being. In contrast, negative daily social well-being was predicted by age, with lower levels of negative social well-being in the older age groups. As in the previous

analyses, these results could not be explained by differences in the control variables (analyses without control variables are reported in the supplemental materials, Table S1).[4]

Age × Goals × Relationship Closeness and Situational Valence. Model 3 explored whether the associations between social approach and avoidance goals, age, and daily social well-being were moderated by (1) the closeness of the person in the particular situation and (2) the valence of the situation (i.e., positive or negative situation). In other words, we tested a three-way interaction between Age × Approach Goals × Closeness and a three-way interaction between Age × Avoidance Goals × Closeness as predictors of positive and negative daily social well-being (Model 3a). The same three-way interactions were run for the valence of the situation (Age × Approach Goals × Valence of the Situation, Age × Avoidance Goals × Valence of the Situation; Model 3b). None of the interactions reached statistical significance, neither for relationship closeness (all $ps \geq .23$), nor for situational valence (all $ps \geq .55$; detailed results of Models 3a and 3b with and without control variables are reported in the supplemental material, Tables S3–S6). Thus, irrespective of the situational valence (i.e., positive or negative) and irrespective of the closeness of the relationship (e.g., close or peripheral), young adults' social well-being was associated more strongly with social approach and social avoidance goals than the well-being of middle-aged and older adults.

As there were no significant three-way interactions, we explored the two-way interactions (Approach Goals, Avoidance Goals, and Age × Relationship Closeness in Model 3a, Approach Goals, Avoidance Goals, and Age × Valence of the Situation in Model 3b). Only one interaction was statistically significant (all other $ps \geq .07$, see the supplemental materials, Tables S3–S6). Specifically, social approach goals and

relationship closeness interacted in the prediction of positive social well-being (b = -0.02, p = .04, 95% CI [-0.05, -0.002]. Approach goals were only associated with positive social well-being in very close (b = 0.03, p < .001, 95% CI [0.01, 0.05]) and close social relationships (b = 0.04, p = .01, 95% CI [0.01, 0.07]), but not in less close or new social relationships (ps ≥ .38).

Age Differences in Social Approach and Social Avoidance Goals

Finally, we tested whether the mean levels of social approach and avoidance goals in the three age groups differed and whether the potential age differences were moderated by relationship closeness, the valence of the situation, or their interaction. To that end, we ran multilevel linear models for social approach and social avoidance goals as the criterion variables and age, relationship closeness, and the valence of the situation as predictors. Using a similar procedure as in the previous analyses, we started with the simplest model (Model 1) with age as predictor of social approach and social avoidance goals. In Model 2, we added relationship closeness, valence of the situation, and their interaction with age as predictors (Age × Relationship Closeness, Age × Situational Valence, Relationship Closeness × Situational Valence, Age × Relationship Closeness × Situational Valence). There were no age-related differences in social approach and social avoidance goals, ps ≥ .36, and neither relationship closeness nor the valence of the situation interacted with age in the prediction of social approach or social avoidance goals (all ps ≥ .10; for detailed report of these analyses, see supplemental materials: Tables S7–S9). The only significant interaction occurred between relationship closeness and the valence of the situation as predictor of social avoidance goals (b = -0.28, p = .01, 95% CI [-0.50, -0.07]). A subgroup analysis revealed that the difference in social avoidance goals between the most positive and the most negative interaction of the day was more

pronounced in very close (b = 0.98, p < .001, 95% CI [0.84, 1.13]; most positive situation: M = 2.22, SD = 2.39, most negative situation: M = 3.31, SD = 2.31), close (b = 0.90, p < .001, 95% CI [0.72, 1.09]; most positive: M = 2.27, SD = 2.12, most negative: M = 3.34, SD = 1.91), and less close relationships (b = 0.55, p < .001, 95% CI [0.39, 0.71]; most positive: M = 2.09, SD = 2.06, most negative: M = 2.67, SD = 2.13), than in new contacts (b = 0.20, p = .09, 95% CI [-0.03, 0.43]; most positive: M = 2.30, SD = 2.22, most negative: M = 2.45, SD = 2.28).

Discussion

Social integration is essential for well-being and health throughout the lifespan (Cacioppo et al., 2002; Umberson et al., 2010). The stability of the importance of social integration, however, does not necessarily imply that the mechanisms by which people achieve the feeling of being connected and not lonely are invariant across adulthood. Given the essential role of social approach and social avoidance motivation for social well-being, the present study addressed the question concerning whether the correlates of the motivations change across adulthood. In other words: Is it potentially beneficial to approach positive social outcomes beyond young adulthood? Is it potentially detrimental to avoid negative social outcomes until old age? The present study demonstrates that social approach and social avoidance goals are more strongly associated with social well-being in young compared to middle-age and older adulthood. In the following, we will discuss these findings and elaborate on their significance for the existing literature.

Age-Differential Functionality of Social Approach and Social Avoidance Goals

The main result of the present study is that social approach goals can be more and social avoidance goals less beneficial for social well-being in young adulthood compared to middle-age and older adulthood. We argue that this is the case because

social approach and social avoidance goals serve different developmental tasks. The motivational research literature has demonstrated that people of different ages face different developmental tasks (defined as age-graded normative expectations) that shape their personal goals (Cantor, 1990; Emmons, 1986; Havighurst, 1972; Klinger, 1977; Little, 1983; Markus & Nurius, 1986; McAdams & Olson, 2010; Neugarten, 1964; Nurmi, 1991; Wrosch & Freund, 2001). Successful achievement of personal goals leads to happiness, whereas failure to do so leads to unhappiness (Neugarten, Moore, & Lowe, 1965). In young adulthood, establishing new social relationships is a central aspect of most developmental tasks (Nurmi, 1992), rendering social approach goals potentially beneficial and social avoidance goals potentially detrimental. As people age, new social relationships become less important (Lang & Carstensen, 1994). In addition, older adulthood is characterized by a stronger avoidance of highly arousing negative emotions that are associated with interpersonal conflict and rejection (Charles & Piazza, 2009). The results of the present study suggest that these age-related changes render social approach goals potentially less and social avoidance goals potentially more beneficial as people age. These findings are also in line with more recent personality theories suggesting that goals are flexible adaptations to changing life circumstances (e.g., McAdams & Olson, 2010). An interesting direction for future research will be to address the question whether circumstances that are less age normative alter the age-related adaptivity of social approach and avoidance goals. For example, older adults who move to a new community might benefit from social approach goals because they enable the newcomers to form new social relationships (for related findings, see Nikitin et al., 2012). This idea is in line with developmental contextualism (Lerner, 1991) and ecological models of human development (Bronfenbrenner, 1979) that call for more context information when discussing age-

related changes. As discussed earlier, developmental tasks are one possible contextual variable that might explain social development (for a similar approach, see Hutteman, Hennecke, Orth, Reitz, & Specht, 2014). On the other hand, biological factors might also add to developmental changes in the socio-motivational domain. For example, older adults' reduced physiological flexibility leads to greater immunological impairment to (social) stress compared to younger adults (Graham, Christian, & Kiecolt-Glaser, 2006), making avoidance of negative social encounters potentially more adaptive for older adults (see Charles, 2010, for a similar conclusion). Disentangling contextual from biological factors in socio-motivational development is a next step for future research.

Note that the adaptivity of social avoidance goals in older adulthood was expressed as the absence of the negative correlation between social avoidance goals and well-being that was present in the young group. Thus, it seems that the benefits of social avoidance goals in older age are expressed in the independence of social well-being from social avoidance goals rather than in the enhancement of social well-being by social avoidance goals. This is in line with previous findings showing that the association between negative affect and avoidance of interpersonal tensions is less pronounced (but not reversed) in older compared to younger adults (Charles et al., 2009). As Charles and colleagues put it, older adults may be less distressed because they have less to lose from social avoidance goals than young adults. Thus, the negative correlates of social avoidance goals decrease in older age, but they do not turn positive.

An important finding of the present study is that the age-related differences in the relationship between social approach-avoidance goals and daily social well-being were unaffected by situational valence or relationship closeness, suggesting that the

results are robust across situations and relationships. Interestingly, however, social approach goals were generally (across all age groups) more strongly associated with feelings of social integration when pursued in very close and close social relationships as compared to less close or new social relationships. This finding suggests that, irrespective of age, people might profit most from approach motivation in relationships that are emotionally meaningful, which is in line with the notion that people possess a strong need to belong that can be satisfied best in emotionally close relationships (Baumeister & Leary, 1995).

Motivational Origins of Daily Feelings of Integration and Isolation

We hypothesized that daily feelings of social integration have different motivational correlates than daily feelings of social isolation. Specifically, we hypothesized that feeling loved and integrated would be associated with social approach but not by social avoidance motivation, whereas feeling lonely and rejected would be associated with social avoidance but not by social approach motivation. These hypotheses were only partially supported. Whereas negative social well-being was associated with social avoidance (but not social approach) goals, both social approach and social avoidance goals were associated with positive social well-being. This unpredicted result is less surprising given the substantial negative correlation between positive and negative social well-being (see Table 3). This finding may even suggest that the two aspects of social well-being can be conceived of as two poles of the same dimension (instead of two largely independent dimensions). The main argument for separating positive and negative aspects of social well-being are their different predictors in previous research. Positive social feelings arise from positive social experiences, whereas negative social feelings arise from negative social experiences (Hsu et al., 2013). Accordingly, feelings of social connection are located

in neural regions associated with reward (ventral striatum and middle insula), while feelings of social disconnection are located in neural regions associated with negative affect and pain (dorsal anterior cingulate cortex and anterior insula; Morelli et al., 2014). Given this evidence, the unpredicted association between social approach and social avoidance goals and positive social well-being need further replication before we can conclude that this finding is a meaningful extension of the existing research.

In a similar vein, social approach and social avoidance goals were substantially correlated in the present study. Thus, the present study suggests that social approach and avoidance motivation may not be as independent as previously assumed, at least at the situational level. In contrast, there is relatively robust evidence that when assessed retrospectively, social approach and avoidance goals are only relatively weakly correlated (Elliot et al., 2006; Nikitin et al., 2012). It is well known that retrospective and prospective assessment differ substantially (Henry, Moffitt, Caspi, Langley, & Silva, 1994). One reason for the co-occurrence of social approach and social avoidance motivation at the situational level may be the fact that social situations are complex (Baldwin, 1992; Horowitz et al., 2006) and comprised of both positive and negative social cues. Thus, when one is in a social situation, it is possible to approach positive possibilities as well as avoid negative possibilities and people often do both, as the present findings indicate. In addition, both social approach and social avoidance goals are expressions of the same need to belong (Mehrabian & Ksionzky, 1974). However, the present findings also indicate that it is important to treat social approach and social avoidance goals as two dimensions because they differentially predict social well-being. Future research is needed to explore in more detail under which circumstances and why social approach and avoidance motivation (do not) co-occur.

Age as a Predictor of Daily Social Approach and Social Avoidance Goals

The present study did not find the expected mean-level differences in age groups with respect to social approach and avoidance goals. This may be due to the assessment of social approach and avoidance goals in the most positive and the most negative social situation of the day. It is possible that the selection of the situations in the present study diminished possible age-related effects on social approach and avoidance goals, for example, if all age groups pursue similar levels of social approach and avoidance goals in their most positive and most negative social situations. Future studies are needed to test this possible explanation directly.

The only predictor of social avoidance goals found in the present study was an interaction of situational valence and relationship closeness. Social avoidance goals were more pronounced in negative (compared to positive) social interactions, the closer the relationship was. This difference might indicate higher importance of negative interactions with close as compared to less close social partners. The closer the relationship, the more stressful is a negative interaction (e.g., Antonucci, Akiyama, & Lansford, 1998), which might translate into higher effort to avoid a negative outcome of the situation. As most of the previous research on social approach and social avoidance motivation was conducted within close social relationships or without specifying the closeness of the relationship (for a summary of this research, see Nikitin & Schoch, 2014), it is an important direction for future research to systematically test social approach and avoidance motivation and their correlates in different types of relationships.

A related finding that might serve as a starting point for future research is the age-differential frequency of daily social interactions. Although all participants in the present study reported most frequently very close social partners in their positive and

negative daily social interactions, their second most frequent social partners were less close (not close) persons. In other words, very close but also less close social partners are significant sources of positive and negative daily social interactions. Interestingly, this was particularly true for the older age groups. In contrast, young adults reported more often close social partners in their daily positive and negative social interactions than middle-aged and older adults. If we assume that very close relationships include particularly partner and close family, close relationships friends, and less close relationships neighbors, work colleagues, shopkeepers etc. (Neyer, Wrzus, Wagner, & Lang, 2011), we speculate that friends are more often sources of both positive and negative social interactions for young adults, whereas middle-aged and older adults rely more on family and peripheral social relationships. Although there is a lot of research on close relationships (Neyer & Lang, 2003), less is known about the role of peripheral relationships in adulthood. The findings of the present research call for the inclusion of the latter when studying peoples' daily social interactions.

Strengths and Limitations

A particular strength of the present study is the use of the diary method, which allowed us to assess the association between goals and social well-being in participants' everyday contexts (Bolger, Davis, & Rafaeli, 2003; Reis & Wheeler, 1991), while minimizing retrospective recall (Shiffman, Stone, & Hufford, 2008). Moreover, diary methods are characterized by high compliance (response rates over 80% even in older samples; Cain, Depp, & Jeste, 2009) and its online version as used in the present research allows even higher control over compliance than paper-pencil versions.

Unlike many other studies on age-related differences in adulthood, the present study includes middle-aged adults. This approach counteracts problems that are

associated with extreme-group comparisons such as the overestimation of age-related effects (Freund & Isaacowitz, 2014). Further, the present study controlled for such powerful predictors of social well-being as habitual subjective well-being, subjective mental and physical health, life satisfaction, and partnership status. Moreover, it accounted for the possibility that contextual factors, such as the valence of the situation or the closeness of the social relationship, affect people's motivation.

However, the present study also has some shortcomings. It is based on an online sample of well-educated, healthy, and relatively happy adults from a wealthy, industrialized country. Thus, replications in other socioeconomic groups and other cultures are needed to assess the generalizability of the findings. In addition, the cross-sectional design of the study regarding age differences makes it impossible to disentangle age-related from other (e.g., generational) effects. Similarly, the present findings are correlative, leaving the question of causality open. It is possible that social goals are the result of loneliness and low social integration. For example, research on loneliness suggests that short-term loneliness enhances, whereas long-term reduces people's attempts to connect with others (Cacioppo & Hawkley, 2005). Thus, it is possible that social well-being and social goals are connected in a bi-directional manner. Longitudinal research is needed to test the development of the associations between goals and well-being across adulthood. A particularly interesting future direction is to test when and under which circumstances social approach goals turn out to be potentially less beneficial and social avoidance goals potentially less detrimental.

The present study assessed social approach and avoidance goals very broadly (i.e., as the approach of any positive and the avoidance of any negative social outcome, respectively). The strength of this approach is that it enabled us to capture

all social approach and avoidance goals that people might pursue in their daily social lives. However, the limitation is that we cannot rule out the possibility that goal contents differ between young, middle-aged, and older people and that these differences drive the age-related relationship between goals and social well-being. Future studies are needed to test this alternative explanation. Similarly, some of the control variables were assessed by single-item questions (e.g., health). Although single-item measures often correlate with multiple-items instruments (e.g., Cunny & Perri, 1991), future research should include more reliable instruments.

Finally, although the diary method has many strength, it has also several limitations. First, participants need to be used to electronic devices, which make the sample selective particularly in the older group (Cain et al., 2009). Paper-pencil diaries might be an alternative for samples that are less familiar with or have no access to electronic devices. In addition, participants were asked to report their social interactions of the last 24 hours. Although this is a particular strength because it gives the participants the freedom to fill out the diary at any time of the day, the disadvantage is that some participants may have reported the same social interaction twice (e.g., when completing one diary in the evening and the other one in the following morning). Although the participants might have understood that we were interested in new social interactions every day, we cannot rule out that there might be some instances of dual reporting the same incident. Thus, future studies using the same approach should include some control mechanism or instruct participants explicitly not to report the same interaction more than once.

Conclusions

The present research provides further empirical evidence for the fruitfulness of the motivational approach to studying adult social development. It demonstrates that

social approach and social avoidance goals are associated with individual differences in the social well-being of young, middle-aged, and older adults. Moreover, it shows that feelings of social integration and isolation are largely associated with social approach and social avoidance goals, which has important implications for the understanding of social well-being.

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Footnotes

[1]The German online recruitment service has a databank of 100,000 respondents with an average response rate of approximately 40%. Respondents come from all regions of Germany.

[2]There were no systematic differences between the completers and the non-completers with respect to the variables reported in Table 1 (all ps $\geq .06$) with three exceptions: (1) Completers were more often married than non-completers (48.3% vs. 31.3%), $\chi^2(1) = 7.18$, $p = .01$, (2) they were less often in a stable partnership (17% vs. 26.9%), $\chi^2(1) = 4.15$, $p = .047$, and (3) they had completed less often vocational training (63.3% vs. 76.1%), $\chi^2(1) = 4.40$, $p = .04$.

[3]Including age as a continuous variable did not change the results.

[4]We explored whether there was a significant two-way or three-way interaction between any of the control variables (gender, partnership status, mental or physical health, satisfaction with life, valence, positive activation or negative activation of subjective well-being, growth or deficit-reduction orientation), social approach goals, social avoidance goals, and age as predictors of positive and negative daily social well-being. The results of these analyses are reported in the supplemental materials (pp. S10–S11).

Table 1

Sociodemographic and Control Variables

	Young	Middle-Aged	Old	χ^2(df = 2) or *F*(2, 741)
Age	29.80 (6.05)	50.07 (5.72)	67.65 (5.01)	-
Gender (% male)	50.2	53.4	51.6	< 1
Relationship status (%)				
Single	36.0[a]	16.6[b]	6.7[c]	68.86***
Widowed	0.4[a]	2.8[a]	11.9[b]	37.73***
Divorced	0.4[a]	13.8[b]	15.5[b]	36.64***
Married	28.0[a]	51.8[b]	61.9[c]	59.13***
Stable partnership	35.1[a]	15.0[b]	4.0[c]	83.65***
Parent status (%)				
One or more children	29.7[a]	66.8[b]	83.3[c]	153.99***
Highest level of education (%)				
Obligatory school	10.5	7.1	6.3	3.19
Vocational training	53.6[a]	67.6[b]	65.9[b]	12.18**
University	36.0[a]	25.3[b]	27.8[b]	7.33*
Employment status (%)				
Employed	60.7[a]	67.6[a]	10.7[b]	194.42***
Unemployed	5.0	8.3	4.0	4.72
Retired	0[a]	10.7[b]	79.8[c]	439.13***
Homemaker	7.9	7.5	4.4	3.09
In school	30.1[a]	0.8[b]	0[b]	160.17***
Mental health	3.83 (1.56)[a]	3.94 (1.74)[a]	4.35 (1.50)[b]	7.13***
Physical health	4.19 (1.20)[a]	3.60 (1.45)[b]	3.61 (1.46)[b]	15.28***
Satisfaction with life	4.03 (1.23)[a]	3.96 (1.42)[a]	4.42 (1.27)[b]	9.16***
SWB: Valence	3.66 (1.15)[a]	3.75 (1.19)[a]	4.14 (1.19)[b]	11.56***
SWB: PA	2.96 (1.11)[a]	3.11 (1.21)[a]	3.70 (1.19)[b]	27.02***
SWB: NA	2.70 (1.13)[a]	2.53 (1.22)[a]	1.92 (1.22)[b]	29.82***
Growth orientation	4.32 (1.01)	4.20 (1.11)	4.27 (1.12)	< 1
Deficit-reduction or.	3.97 (1.11)[a]	3.46 (1.20)[b]	3.40 (1.31)[b]	16.12***

Note. SWB = Subjective well-being. PA = Positive activation. NA = Negative activation. or = orientation. Frequencies are presented in percent. All other numbers represent means and standard deviations with scale range from 0 (lowest value) to 6 (highest value). Superscripts indicate significance of post-hoc tests. Groups with different superscripts are different from each other ($p < .05$). Obligatory school in Germany starts at age of 6-7 and takes between 9 and 13 years, depending on the school track. Employment status: participants selected one or more options (7 young, 22 middle-aged, and 11 older participants selected no option). *$p < .05$. **$p < .01$. ***$p < .001$.

Table 2

Variables Assessed on the Daily Level

Variable	*n*	Min α, Max α	Young	Middle-Aged	Old	Test of Difference *F*(2,741)
Positive social WB	2	.77, .83	4.08 (1.18)[a]	4.25 (1.19)[ab]	4.39 (1.19)[b]	4.04*
Negative social WB	2	.70, .74	1.40 (1.24)[a]	1.12 (1.15)[b]	0.99 (1.15)[b]	7.84***
Positive situations						
Social approach goals	1	-	3.77 (1.28)	3.86 (1.53)	3.72 (1.48)	< 1
Social avoidance goals	1	-	2.13 (1.54)	2.23 (1.69)	2.25 (1.67)	< 1
Relationship closeness	1	-	1.91 (0.64)	1.90 (0.69)	1.88 (0.67)	< 1
Negative situations						
Social approach goals	1	-	2.94 (1.33)	2.92 (1.56)	2.77 (1.58)	< 1
Social avoidance goals	1	-	3.00 (1.36)	2.95 (1.55)	2.73 (1.65)	1.82
Relationship closeness	1	-	2.55 (0.74)	2.61 (0.76)	2.53 (0.75)	< 1

Note. WB = Well-being. Scale range is 0 (lowest value) to 6 (highest value) for all variables with the exception of closeness (1 = very close person, 2 = close person, 3 = less close person, 4 = new contact). The superscripts indicate significance of post-hoc tests based on the least square difference method. Groups with different superscripts are significantly different from each other ($p < .05$). *n* indicates number of items. *$p < .05$. ***$p < .001$.

Table 3

Bivariate Correlations Between All Continuous Variables (Daily Variables on the Aggregated Level)

	2	3	4	5	6	7	8	9	10	11	12	13
1 Mental health	.46***	.65***	.63***	.55***	-.58***	.16***	-.13***	.42***	-.44***	.04	-.11**	.03
2 Physical health		.48***	.43***	.40***	-.27***	.17***	.06	.26***	-.21***	.10**	.01	-.00
3 SWL			.65***	.56***	-.56***	.20***	-.06	.54***	-.46***	.08*	-.04	-.05
4 SWB: Valence				.79***	-.77***	.17***	-.12**	.48***	-.50***	.01	-.12**	.03
5 SWB: PA					-.76***	.19***	-.04	.42***	-.31***	.03	-.05	.06
6 SWB: NA						-.12**	.19***	-.41***	.40***	.04	.12**	-.06
7 Growth							.38***	.30***	-.12**	.15***	.09*	-.02
8 Deficit-reduction								.06	.13***	.21***	.18***	-.13**
9 Positive social WB									-.63***	.16***	-.01	-.16***
10 Negative soc. WB										.06	.22***	.04
11 Approach goals											.68***	-.29***
12 Avoidance goals												-.14***
13 Relationship closeness												–

Note. SWL = Satisfaction with life. SWB = Subjective well-being. WB = Well-being. PA = Positive Activation. NA = Negative Activation. Growth = Growth orientation. Deficit-reduction = Deficit-reduction orientation. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 4

Distribution of Social Interactions Across Cells as Defined by the Valence of the Situation, Relationship Closeness, and Age

	Age Category			Total	$\chi^2(2)$
	Young	Middle-Aged	Old		
The most positive social interactions (N = 4,202)					
Very Close	561[a] (27.8%)	686[b] (34.0%)	768[c] (38.1%)	2015	32.36***
Close	365[a] (37.9%)	316[ab] (32.8%)	281[b] (29.2%)	962	11.10**
Less Close	222[a] (27.0%)	282[b] (34.8%)	307[b] (37.9%)	811	14.12**
New	136 (33.0%)	132 (31.9%)	146 (35.3%)	414	< 1
Total	1284	1416	1502		
The most negative social interactions (N = 4,202)					
Very Close	310[a] (28.2%)	374[b] (34.0%)	415[b] (37.8%)	1099	15.29***
Close	229 (37.5%)[a]	183 (30.0%)[b]	199 (32.6%)[ab]	611	5.36[+]
Less Close	415[a] (28.3%)	512[b] (34.9%)	541[b] (36.9%)	1468	17.80***
New	330 (32.2%)	347 (33.9%)	347 (33.9%)	1024	< 1
Total	1284	1416	1502		
All social interactions (positive and negative; N = 8,404)					
Very Close	871[a] (28.0%)	1060[b] (34.0%)	1183[c] (38.0%)	3114	47.59***
Close	594[a] (37.8%)	499[b] (31.7%)	480[b] (30.5%)	1573	14.23**
Less Close	637[a] (28.0%)	794[b] (34.8%)	848[b] (37.2%)	2279	31.63***
New	466 (32.4%)	479 (33.3%)	493 (34.3%)	1438	< 1
Total	2568	2832	3004		

Note. RC = relationship closeness. New = new contact. Reported are absolute numbers. Percentage numbers in parentheses express the proportion of the age groups within the particular relationship-closeness category. Superscripts indicate significant differences between the age groups. ***$p < .001$. **$p < .01$. [+]$p = .07$.

Table 5

Predictors of Positive (Feeling Loved and Integrated) and Negative Daily Social Well-Being (Feeling Lonely and Rejected)

Parameter	Positive daily social well-being		Negative daily social well-being	
	Model 1	Model 2	Model 1	Model 2
	Estimates of fixed effects			
Intercept	0.25 [-0.40, 0.90]	0.14 [-0.54, 0.84]	4.05*** [3.39, 4.70]	4.31*** [3.61, 5.00]
Social approach goals	0.02** [0.01, 0.03]	0.04** [0.02, 0.07]	-0.01 [-0.01, 0.005]	-0.04** [-0.07, -0.02]
Social avoidance goals	-0.01** [-0.02, -0.004]	-0.02 [-0.05, 0.004]	0.02*** [0.01, 0.03]	0.05*** [0.03, 0.08]
Age		0.05 [-0.05, 0.16]		-0.11* [-0.22, -0.01]
Age × social approach goals		-0.01* [-0.02, -0.001]		0.02** [0.01, 0.03]
Age × social avoidance goals		0.004 [-0.01, 0.02]		-0.02** [-0.03, -0.004]
	Estimates of covariance parameters			
Residual	0.55*** [0.53, 0.57]	0.55*** [0.53, 0.57]	0.56*** [0.55, 0.58]	0.56*** [0.55, 0.58]
Intercept	0.78*** [0.70, 0.87]	0.78*** [0.70, 0.87]	0.79*** [0.71, 0.88]	0.78*** [0.70, 0.87]
-2*log likelihood (*n* of parameters)	20,876.12 (16)	20,871.46 (19)	21,099.20 (16)	21,083.50 (19)

Note. Controlled for gender (male vs. female), partnership status (single, widowed, divorced vs. married or in stable partnership), habitual mental and physical health, habitual life satisfaction, habitual subjective well-being (valence, positive activation, negative activation), growth and deficit-reduction orientation, and day (weekdays vs. weekend days). *$p < .05$. **$p < .01$. ***$p < .001$.

Table S1

Goals as Predictors of Positive and Negative Daily Social Well-Being Without Control Variables

Parameter	Positive daily social well-being		Negative daily social well-being	
	Model 1	Model 2	Model 1	Model 2
	Estimates of fixed effects			
Intercept	4.22*** [4.12, 4.31]	3.84*** [3.59, 4.08]	2.12*** [2.03, 2.22]	2.60*** [2.35, 2.86]
Social approach goals	0.02*** [0.01, 0.03]	0.05** [0.02, 0.07]	-0.1 [-0.2, 0.003]	-0.05** [-0.07, -0.02]
Social avoidance goals	-0.01** [-0.02, -0.005]	-0.02 [-0.05, 0.004]	0.02*** [0.01, 0.03]	0.05*** [0.02, 0.08]
Age		0.19** [0.08, 0.31]		-0.24*** [-0.35, -0.12]
Age × social approach goals		-0.01* [-0.03, -0.001]		0.02** [0.007, 0.03]
Age × social avoidance goals		0.004 [-0.008, 0.02]		-0.01* [-0.03, -0.003]
	Estimates of covariance parameters			
Residual	0.56*** [0.54, 0.57]	0.56*** [0.54, 0.57]	0.57*** [0.55, 0.59]	0.57*** [0.55, 0.59]
Intercept	1.34*** [1.21, 1.49]	1.33*** [1.19, 1.48]	1.32*** [1.18, 1.47]	1.29*** [1.16, 1.43]
-2*log likelihood	21,352.46 (5)	21,339.56 (8)	21,502.55 (5)	21,475.54 (8)
(*n* of parameters)				

Note. *$p < .05$. **$p < .01$. ***$p < .001$.

Table S2

Control Variables as Predictors of Positive and Negative Daily Social Well-Being

Parameter	Positive daily social well-being		Negative daily social well-being	
	Estimates of fixed effects			
Intercept	0.24	[-0.41, 0.90]	4.09***	[3.43, 4.74]
Gender	0.27***	[0.14, 0.41]	-0.39***	[-0.53, -0.26]
Partnership status	0.39***	[0.25, 0.53]	-0.36***	[-0.50, -0.22]
Habitual mental health	-0.04	[-0.10, 0.01]	0.05	[-0.01, 0.11]
Habitual physical health	0.04	[-0.02, 0.10]	-0.12***	[-0.18, -0.06]
SWL	0.30***	[0.23, 0.38]	-0.15***	[-0.23, -0.07]
Habitual SWB: Valence	0.15**	[0.04, 0.26]	-0.45***	[-0.56, -0.34]
Habitual SWB: PA	0.02	[-0.07, 0.12]	0.27***	[0.17, 0.37]
Habitual SWL: NA	-0.05	[-0.15, 0.04]	0.08	[-0.02, 0.17]
Growth orientation	0.17***	[0.10, 0.24]	-0.05	[-0.12, 0.02]
Deficit-reduction orientation	0.05	[-0.02, 0.11]	0.06*	[0.002, 0.12]
Day	0.19***	[0.15, 0.22]	-0.13***	[-0.17, -0.09]
	Estimates of covariance parameters			
Residual	0.55***	[0.53, 0.57]	0.57***	[0.55, 0.58]
Intercept	0.78***	[0.70, 0.87]	0.79***	[0.71, 0.89]
-2*log likelihood (*n* of parameters)	20,890.25 (14)		21,117.30 (14)	

Note. SWL = Satisfaction with life. SWB = Subjective well-being. PA = Positive Activation. NA = Negative Activation. *$p < .05$. **$p < .01$. ***$p < .001$.

Table S3

Age, Social Goals, and Relationship Closeness (Model 3a) as Predictors of Positive and Negative Daily Social Well-Being

Parameter	Positive daily social well-being		Negative daily social well-being	
	Estimates of fixed effects			
Intercept	-0.03	[-0.75, 0.70]	4.44***	[3.72, 5.17]
Social approach goals	0.09**	[0.03, 0.15]	-0.08*	[-0.14, -0.02]
Social avoidance goals	-0.07*	[-0.13, -0.01]	0.08**	[0.03, 0.14]
Age	0.12	[-0.04, 0.27]	-0.21*	[-0.36, -0.05]
RC	0.08	[-0.02, 0.19]	-0.06	[-0.17, 0.04]
Age × approach goals	-0.03*	[-0.05, -0.002]	0.04**	[0.01, 0.06]
Age × avoidance goals	0.01	[-0.01, 0.03]	-0.02	[-0.04, 0.01]
Age × RC	-0.02	[-0.07, 0.02]	0.04	[-0.01, 0.08]
Approach goals × RC	-0.02*	[-0.05, -0.002]	0.02	[-0.01, 0.04]
Avoidance goals × RC	0.02	[-0.01, 0.04]	-0.01	[-0.03, 0.01]
Approach × avoidance goals	0.003	[-0.001, 0.01]	-0.002	[-0.01, 0.002]
Age × approach goals × RC	0.01	[-0.004, 0.02]	-0.01	[-0.02, 0.004]
Age × avoidance goals × RC	-0.003	[-0.01, 0.01]	-0.00001	[-0.01, 0.01]
	Estimates of covariance parameters			
Residual	0.55***	[0.53, 0.57]	0.56***	[0.55, 0.58]
Intercept	0.78***	[0.70, 0.87]	0.78***	[0.70, 0.87]
-2*log likelihood (*n* of parameters)	20,855.74 (26)		21,073.26 (26)	

Note. RC = relationship closeness (1 = very close person, 2 = close person, 3 = less close person, 4 = new contact). Controlled for gender (male vs. female), partnership status (single, widowed, divorced vs. married or in stable partnership), habitual mental and physical health, habitual life satisfaction, habitual subjective well-being (valence, positive activation, negative activation), growth and deficit-reduction orientation, and day (weekdays vs. weekend days). *$p < .05$. **$p < .01$. ***$p < .001$.

Table S4

Age, Social Goals, and Valence of the Situation (Model 3b) as Predictors of Positive and Negative Daily Social Well-Being

Parameter	Positive daily social well-being		Negative daily social well-being	
	Estimates of fixed effects			
Intercept	0.04	[-0.71, 0.79]	4.47***	[3.72, 5.23]
Social approach goals	0.10*	[0.02, 0.11]	-0.06	[-0.14, 0.02]
Social avoidance goals	-0.11**	[-0.20, -0.03]	0.08	[-0.01, 0.16]
Age	0.01	[-0.18, 0.20]	-0.14	[-0.34, 0.05]
VS	0.08	[-0.15, 0.31]	-0.12	[-0.36, 0.11]
Age × approach goals	-0.01	[-0.05, 0.02]	0.01	[-0.03, 0.05]
Age × avoidance goals	0.02	[-0.01, 0.06]	-0.01	[-0.05, 0.02]
Age × VS	0.02	[-0.08, 0.12]	0.02	[-0.08, 0.12]
Approach goals × VS	-0.04	[-0.10, 0.01]	0.01	[-0.04, 0.06]
Avoidance goals × VS	0.05	[-0.003, 0.10]	-0.005	[-0.06, 0.05]
Approach × avoidance goals	0.004*	[0.0001, 0.01]	-0.002	[-0.01, 0.002]
Age × approach goals × VS	-0.0005	[-0.02, 0.02]	0.01	[-0.02, 0.03]
Age × avoidance goals × VS	-0.01	[-0.03, 0.01]	-0.004	[-0.03, 0.02]
	Estimates of covariance parameters			
Residual	0.55***	[0.53, 0.57]	0.56***	[0.55, 0.58]
Intercept	0.78***	[0.70, 0.87]	0.78***	[0.70, 0.87]
-2*log likelihood (*n* of parameters)	20,847.42 (26)		21,073.46 (26)	

Note. VS = valence of the situation (1 = most positive situation, 2 = most negative situation). Controlled for gender (male vs. female), partnership status (single, widowed, divorced vs. married or in stable partnership), habitual mental and physical health, habitual life satisfaction, habitual subjective well-being (valence, positive activation, negative activation), growth and deficit-reduction orientation, and day (weekdays vs. weekend days). *$p < .05$. **$p < .01$. ***$p < .001$

Table S5

Age, Social Goals, and Relationship Closeness (Model 3a) as Predictors of Positive and Negative Daily Social Well-Being Without Control Variables

Parameter	Positive daily social well-being	Negative daily social well-being
	Estimates of fixed effects	
Intercept	3.63*** [3.30, 3.96]	1.75*** [1.42, 2.07]
Social approach goals	0.10** [0.04, 0.16]	-0.08** [-0.14, -0.02]
Social avoidance goals	-0.07* [-0.12, -0.01]	0.08** [0.02, 0.14]
Age	0.26** [0.10, 0.43]	-0.33*** [-0.49, -0.16]
RC	0.10 [-0.005, 0.21]	-0.07 [-0.18, 0.04]
Age × approach goals	-0.03* [-0.05, -0.002]	0.03* [0.01, 0.06]
Age × avoidance goals	0.01 [-0.02, 0.03]	-0.01 [-0.04, 0.01]
Age × RC	-0.03 [-0.07, 0.02]	0.04 [-0.01, 0.08]
Approach goals × RC	-0.03* [-0.05, -0.002]	0.02 [-0.01, 0.04]
Avoidance goals × RC	0.01 [-0.01, 0.04]	-0.01 [-0.03, 0.01]
Approach × avoidance goals	0.003 [-0.001, 0.01]	-0.003 [-0.01, 0.001]
Age × approach goals × RC	0.01 [-0.004, 0.02]	-0.01 [-0.02, 0.004]
Age × avoidance goals × RC	-0.002 [-0.01, 0.01]	-0.001 [-0.01, 0.01]
	Estimates of covariance parameters	
Residual	21,320.00 (15)	21,465.22 (15)
Intercept	0.55*** [0.54, 0.57]	0.57*** [0.55, 0.59]
-2*log likelihood (*n* of parameters)	1.33*** [1.19, 1.48]	1.28*** [1.51, 1.43]

Note. RC = relationship closeness (1 = very close person, 2 = close person, 3 = less close person, 4 = new contact). *$p < .05$. **$p < .01$. ***$p < .001$.

Table S6

Age, Social Goals, and Valence of the Situation (Model 3b) as Predictors of Positive and Negative Daily Social Well-Being Without Control Variables

Parameter	Positive daily social well-being		Negative daily social well-being	
	Estimates of fixed effects			
Intercept	3.70***	[3.31, 4.08]	1.78***	[1.40, 2.17]
Social approach goals	0.10*	[0.02, 0.18]	-0.06	[-0.15, 0.02]
Social avoidance goals	-0.11**	[-0.20, -0.03]	0.08	[-0.005, 0.16]
Age	0.16	[-0.04, 0.36]	-0.27**	[-0.47, -0.07]
VS	0.10	[-0.13, 0.33]	-0.13	[-0.36, 0.11]
Age × approach goals	-0.01	[-0.05, 0.02]	0.01	[-0.03, 0.05]
Age × avoidance goals	0.02	[-0.01, 0.06]	-0.01	[-0.05, 0.02]
Age × VS	0.02	[-0.08, 0.12]	0.02	[-0.08, 0.12]
Approach goals × VS	-0.04	[-0.10, 0.01]	0.01	[-0.04, 0.06]
Avoidance goals × VS	0.05	[-0.005, 0.10]	-0.005	[-0.06, 0.05]
Approach × avoidance goals	0.004*	[0.0003, 0.01]	-0.002	[-0.01, 0.002]
Age × approach goals × VS	-0.0005	[-0.02, 0.02]	0.01	[-0.02, 0.03]
Age × avoidance goals × VS	-0.01	[-0.03, 0.01]	-0.004	[-0.03, 0.02]
	Estimates of covariance parameters			
Residual	0.55***	[0.54, 0.57]	0.57***	[0.55, 0.59]
Intercept	1.32***	[1.18, 1.47]	1.28***	[1.15, 1.43]
-2*log likelihood (*n* of parameters)	21,313.48 (15)		21,464.72 (15)	

Note. VS = valence of the situation (1 = most positive situation, 2 = most negative situation). *$p < .05$. **$p < .01$. ***$p < .001$.

Table S7

Age, Valence of the Situation and Relationship Closeness as Predictors of Daily Social Approach and Avoidance Goals

Parameter	Social approach goals		Social avoidance goals	
	Estimates of fixed effects			
	Model 1	Model 2	Model 1	Model 2
Intercept	1.21** [0.31, 2.10]	3.07***[1.93, 4.21]	2.16*** [1.19, 3.13]	-0.22 [-1.47, 1.03]
Age	.04 [-0.08, 0.15]	-0.04 [-0.38, 0.31]	0.06 [-0.07, 0.19]	0.46* [0.08, 0.83]
VS		-0.63* [-1.12, -0.14]		1.72*** [1.18, 2.25]
RC		-0.29 [-0.61, 0.03]		0.40* [0.05, 0.75]
Age × VS		0.12 [-0.10, 0.34]		-0.20 [-0.44, 0.04]
Age × RC		0.05 [-0.10, 0.19]		-0.07 [-0.23, 0.09]
VS × RS		0.01 [-0.19, 0.21]		-0.28* [-0.50, -0.07]
Age × VS × RC		-0.07 [-0.15, 0.02]		0.02 [-0.08, 0.11]
	Estimates of covariance parameters			
Residual	3.36*** [3.25, 3.46]	3.00*** [2.91, 3.10]	3.67*** [3.56, 3.79]	3.52*** [3.41, 3.63]
Intercept	1.09*** [0.95, 1.24]	1.03*** [0.90, 1.17]	1.29*** [1.13, 1.47]	1.27*** [1.12, 1.45]
-2*log likelihood (*n* of parameters)	35,139.28 (15)	34,229.92 (21)	35,939.54 (15)	35,589.70 (21)

Note. VS = valence of the situation (1 = most positive situation, 2 = most negative situation). RC = relationship closeness (1 = very close person, 2 = close person, 3 = less close person, 4 = new contact). Controlled for gender (male vs. female), partnership status (single, widowed, divorced vs. married or in stable partnership), habitual mental and physical health, habitual life satisfaction, habitual subjective well-being (valence, positive activation, negative activation), growth and deficit-reduction orientation, and day (weekdays vs. weekend days). *$p < .05$. **$p < .01$. ***$p < .001$.

Table S8

Age, Valence of the Situation and Relationship Closeness as Predictors of Daily Social Approach and Avoidance Goals Without Control Variables

Parameter	Social approach goals				Social avoidance goals			
	Estimates of fixed effects							
	Model 1		Model 2		Model 1		Model 2	
Intercept	3.41***	[3.17, 3.65]	4.97***	[4.21, 5.74]	2.62***	[2.36, 2.88]	0.14	[-0.69, 0.97]
Age	-0.04	[-0.15, 0.06]	-0.10	[-0.44, 0.24]	-0.03	[-0.15, 0.08]	0.37^{+}	[-0.004, 0.74]
VS			-0.63*	[-1.12, -0.14]			1.72***	[1.19, 2.26]
RC			-0.29	[-0.61, 0.04]			0.40*	[0.05, 0.75]
Age × VS			0.12	[-0.10, 0.34]			-0.20	[-0.44, 0.04]
Age × RC			0.04	[-0.10, 0.19]			-0.07	[-0.23, 0.09]
VS × RS			0.01	[-0.19, 0.21]			-0.28*	[-0.50, -0.07]
Age × VS × RC			-0.06	[-0.19, 0.21]			0.02	[-0.08, 0.11]
	Estimates of covariance parameters							
Residual	3.36***	[3.25, 3.46]	3.00***	[2.91, 3.10]	3.67***	[3.56, 3.79]	3.52***	[3.41, 3.62]
Intercept	1.20***	[1.05, 1.36]	1.12***	[0.98, 1.27]	1.42***	[1.25, 1.61]	1.39***	[1.23, 1.58]
-2*log likelihood (*n* of parameters)	35,193.45 (4)		34,279.87 (10)		35,994.40 (4)		35,642.99 (10)	

Note. VS = valence of the situation (1 = most positive situation, 2 = most negative situation). RC = relationship closeness (1 = very close person, 2 = close person, 3 = less close person, 4 = new contact). Controlled for gender (male vs. female), partnership status (single, widowed, divorced vs. married or in stable partnership), habitual mental and physical health, habitual life satisfaction, habitual subjective well-being (valence, positive activation, negative activation), growth and deficit-reduction orientation, and day (weekdays vs. weekend days). $^{+}p = .05$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table S9

Control Variables as Predictors of Daily Social Approach and Avoidance Goals

Parameter	Social approach goals		Social avoidance goals	
	Estimates of fixed effects			
Intercept	1.30**	[0.44, 2.15]	2.30***	[1.38, 3.22]
Gender	0.04	[-0.14, 0.21]	-0.23*	[-0.42, -0.04]
Partnership status	-0.004	[-0.19, 0.18]	-0.15	[-0.03, 0.13]
Habitual mental health	0.05	[-0.03, 0.12]	0.05	[-0.01, 0.11]
Habitual physical health	0.03	[-0.05, 0.11]	-0.08	[-0.16, 0.01]
SWL	0.08	[-0.02, 0.18]	0.08	[-0.02, 0.19]
Habitual SWB: Valence	-0.04	[-0.18, 0.10]	-0.22**	[-0.40, -0.07]
Habitual SWB: PA	0.06	[-0.07, 0.19]	0.14	[-0.001, 0.28]
Habitual SWL: NA	0.12	[-0.004, 0.25]	0.06	[-0.07, 0.20]
Growth orientation	0.08	[-0.01, 0.17]	0.08	[-0.01, 0.18]
Deficit-reduction orientation	0.16***	[0.08, 0.14]	0.13**	[0.05, 0.22]
Day	0.07	[-0.02, 0.17]	0.05	[-0.04, 0.14]
	Estimates of covariance parameters			
Residual	3.36***	[3.25, 3.46]	3.67***	[3.56, 3.79]
Intercept	1.09***	[0.95, 1.25]	1.29***	[1.14, 1.47]
-2*log likelihood (*n* of parameters)	35,139.68 (14)		35,940.39 (14)	

Note. SWL = Satisfaction with life. SWB = Subjective well-being. PA = Positive Activation. NA = Negative Activation. *$p < .05$. **$p < .01$. ***$p < .001$.

Age × Goals × Control Variables as Predictors of Social Well-Being

We explored whether there was a significant two-way or three-way interaction between any of the control variables (gender, partnership status, mental or physical health, satisfaction with life, valence, positive activation or negative activation of subjective well-being, growth or deficit-reduction orientation), social approach goals, social avoidance goals, and age as predictors of positive and negative daily social well-being. Out of the 110 analyses (for each of the 11 control variables, we conducted a Control Variable × Approach Goals, Control Variable × Avoidance Goals, Control Variable × Age, Control Variable × Approach Goals × Age, Control Variable × Avoidance Goals × Age interaction predicting both positive and negative daily social well-being), six were statistically significant. First, there was a three-way Gender × Avoidance Goals × Age interaction in the prediction of negative daily social well-being ($b = 0.02$, $p = .04$), indicating that the interaction between social avoidance goals and age was only significant for males ($b = -0.03$, $p = .001$), but not for females ($b = -0.004$, $p = .60$). In fact, young males reported a higher level of negative well-being when they pursued social avoidance goals ($b = 0.06$, $p < .001$), whereas the association was not significant for any other Gender × Age group (all ps ≥ .12). Second, subjective mental health interacted with age in the prediction of negative daily social well-being ($b = -0.08$, $p = 0.02$). Mental health predicted negative daily social well-being more strongly in the middle-aged group ($b = -0.13$, $p = .02$) and the older group ($b = -0.19$, $p < .001$) than in the younger group ($b = -0.07$, $p = .30$). Third, deficit-reduction orientation interacted with age and social approach goals in the prediction of positive daily social well-being ($b = -0.01$, $p = .01$). The two-way interaction between deficit-reduction orientation and social

approach goals was significant in the younger age group ($b = 0.02$, $p = .003$), but not in the other two age groups ($ps \geq .55$). The positive interaction coefficient suggests that higher deficit-reduction orientation was associated with a stronger correlation between social approach goals and positive social daily well-being in the younger age groups. Finally, there was a significant three-way Age × Day of the Week × Approach Goals interaction predicting positive social well-being ($b = 0.03$, $p = .03$). The two-way interaction between day and approach goals was only significant in the younger group ($b = -0.04$, $p = .045$) but not in the other age groups ($ps \geq .06$). Specifically, approach goals were associated with positive social well-being during the week ($b = 0.04$, $p < .001$) but not on weekends ($b = 0.002$, $p = .88$). Although these findings are interesting, we hesitate to interpret them because they could be the result of α-error inflation due to multiple comparisons and because they are purely explorative, not theory-based. However, they provide possible directions for future research.

Items

A full set of items for the Belongingness Orientation Scale (Lavigne et al., 2011) assessing growth and deficit-reduction orientation:

My interpersonal relationships are important to me because ...
... I find it exciting to discuss with people on numerous topics. (approach)
... I have a sincere interest in others. (approach)
... I consider that the people I meet are fascinating. (approach)
... they allow me to discover a lot about others. (approach)
…they allow me to learn about myself. (approach)
…it appeases me to feel accepted. (avoidance)
…I need to feel accepted. (avoidance)
…I don't want to be alone. (avoidance)
…it gives me a frame of reference for the important decisions I have to make. (avoidance)
…they fill a void in my life. (avoidance)

A full set of items for the Multidimensional Mood Questionnaire (Steyer et al., 1997) assessing habitual well-being (Valence "V", Positive Activation "PA", and Negative Activation "NA"). Items that were recoded are marked with an "r":

"How often have you felt like this in the last few weeks?"
satisfied (V)
rested (PA)
uneasy (NA)
listless (PA, r)
calm (NA, r)
good (V)
tired (PA, r)
restless (NA)
bad (V, r)
alert (PA)
unwell (V, r)
relaxed (NA, r)